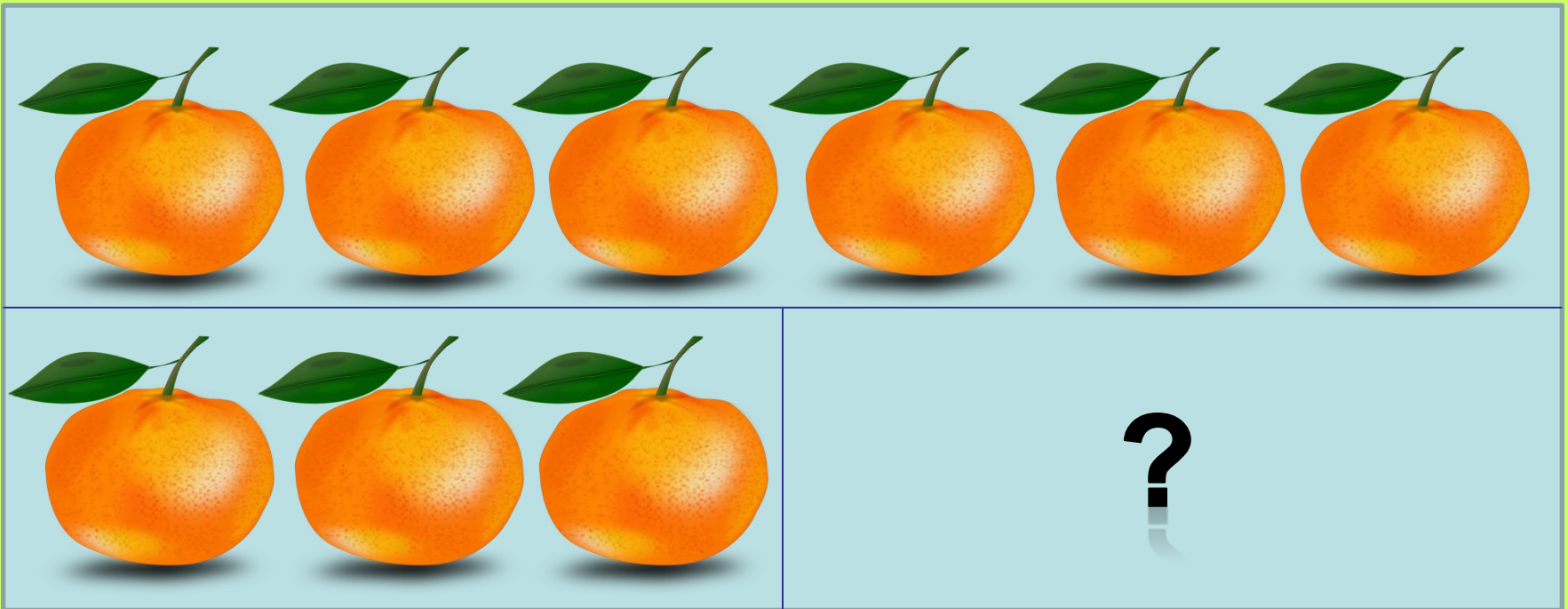




The Bar Model

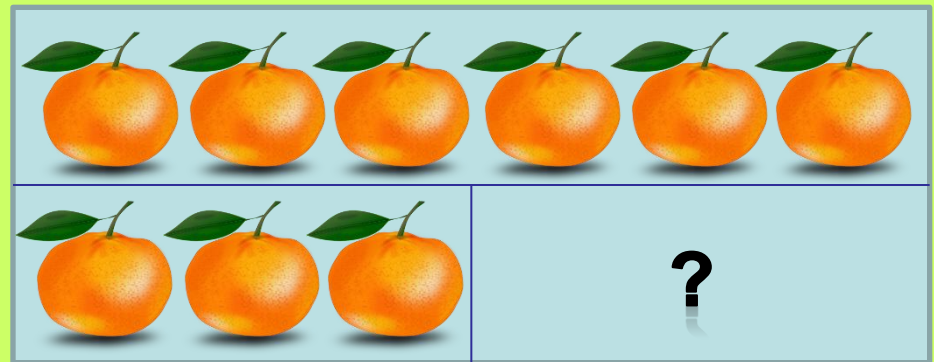
An introduction for parents





What will we cover today?

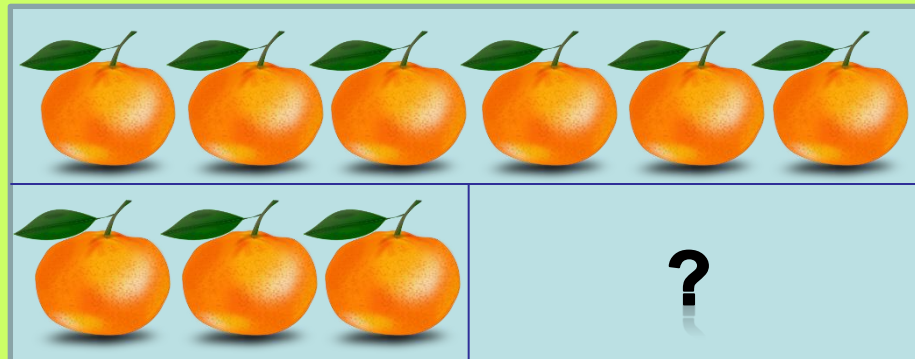
- What is the bar model?
- Why are we using it?
- How does it work?
- How can you help?
- Have a go!





What is the Bar Model?

- A way of representing a calculation or maths problem;
- Not necessarily a method for a solution!



How many oranges are missing?



What is the Bar Model?

16	
9	7

$$9 + 7 = 16$$

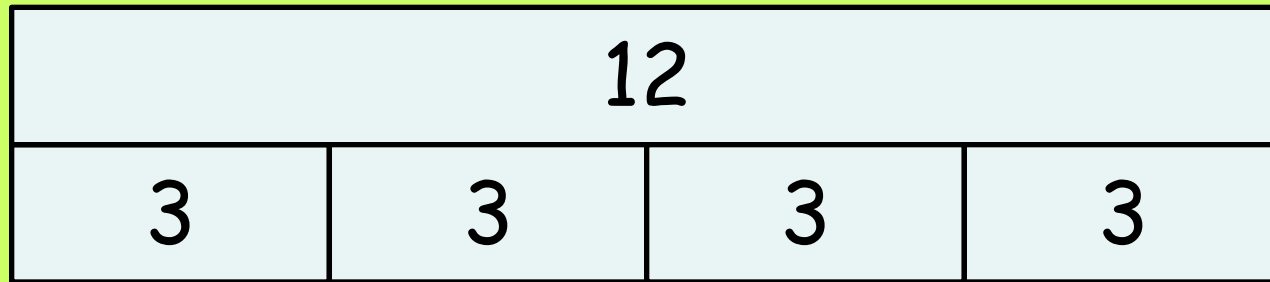
$$7 + 9 = 16$$

$$16 - 9 = 7$$

$$16 - 7 = 9$$



What is the Bar Model?



$$3 \times 4 = 12$$

$$4 \times 3 = 12$$

$$12 \div 4 = 3$$

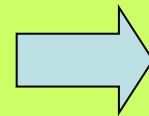
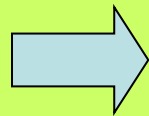
$$12 \div 3 = 4$$



Why are we using it?

How much of that biscuit have you eaten?

CONCRETE → **ICONIC** → **SYMBOLIC**



$\frac{1}{4}$

Action

Image

Notation



What's this?



?

Instant coffee

Hot Water

Milk



What's this?



?

Espresso

Steamed milk



What's this?



?

Espresso

Chocolate
syrup

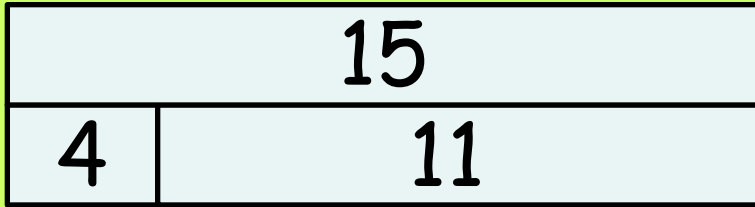
Steamed milk

Steamed
milk

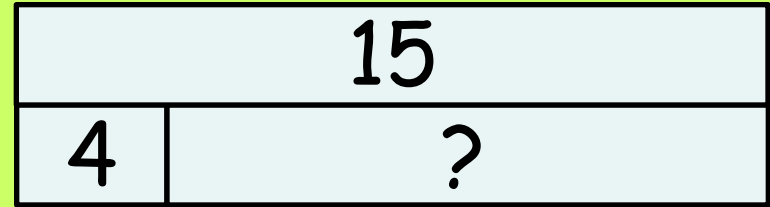


Why are we using it?

$4 + 11 = ?$



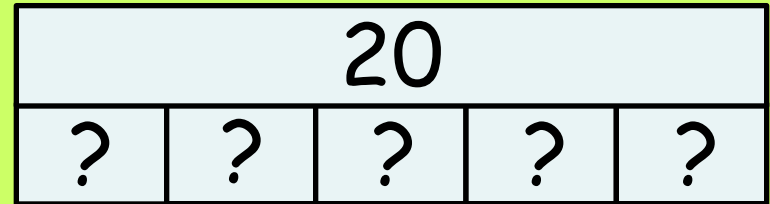
$15 - 4 = ?$



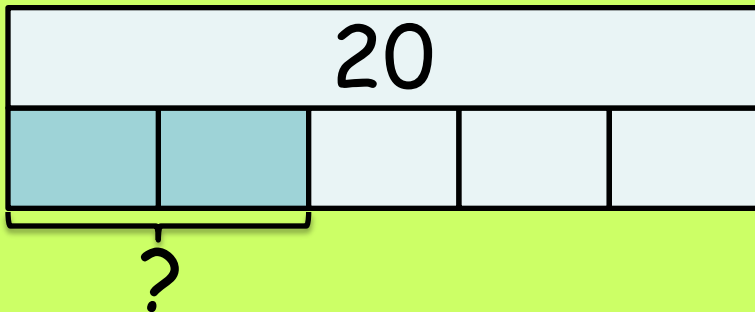
$5 \times 4 = ?$



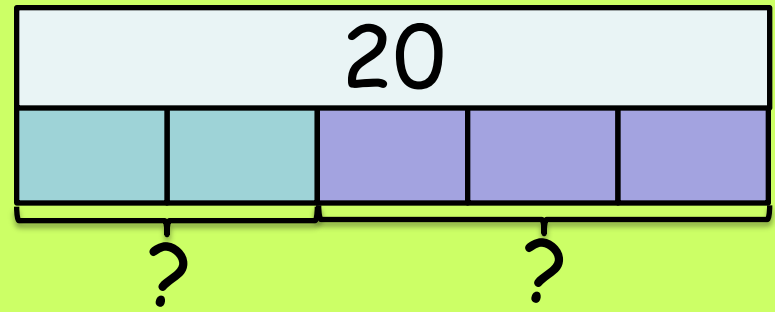
$20 \div 5 = ?$



$\frac{2}{5} \text{ of } 20 = ?$

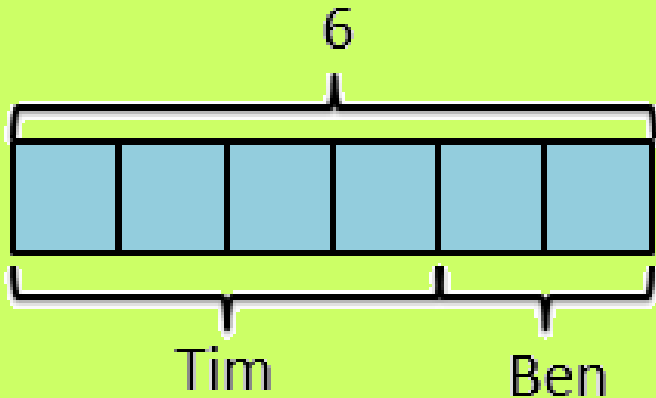
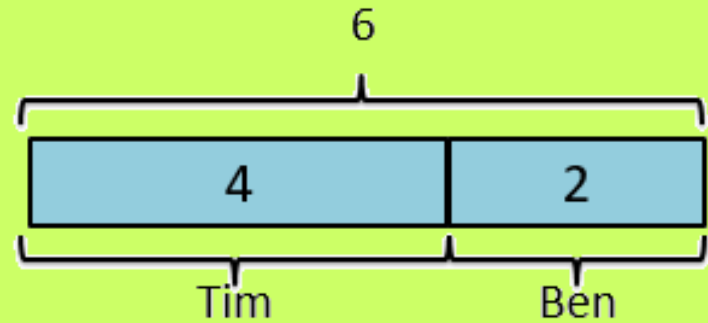
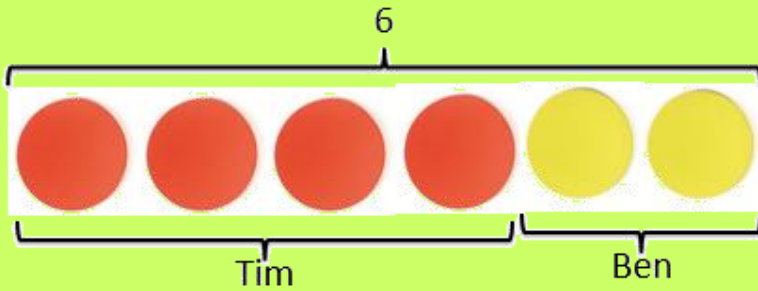
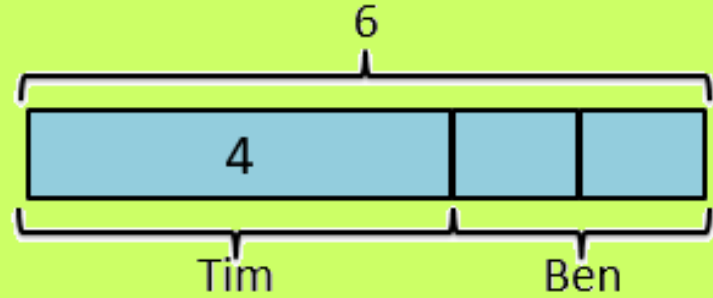
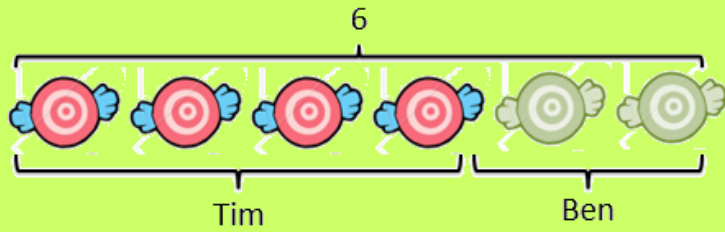


Share 20 in the ratio 2:3





How does it work?



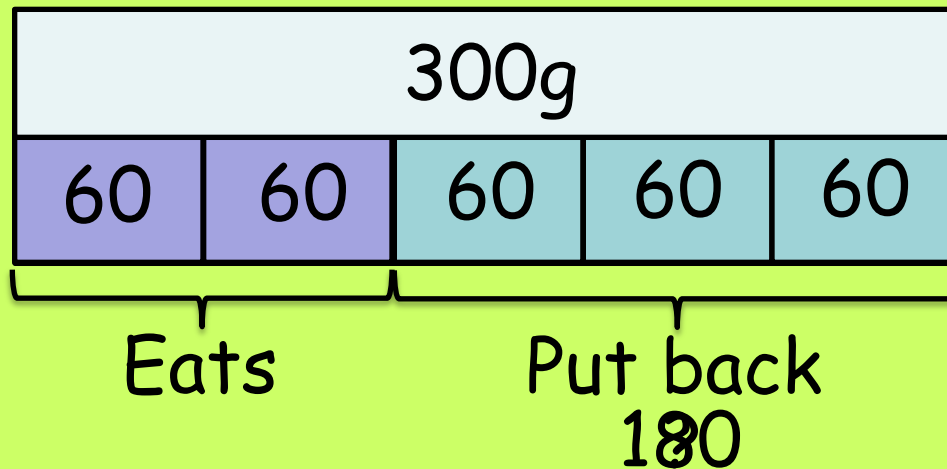
$$4 + 2 = 6$$



How does it work?

Solve... Matthew has a 300g block of cheese. He eats $\frac{2}{5}$ of the cheese and puts the rest back in the fridge.
How much cheese did Matthew put back in the fridge?

Model



Calculations

$$300 \div 5 = 60$$

$$3 \times 60 = 180$$



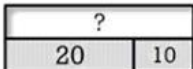
How does it work?



Bar-model



whole, biggest, everything, final amount,
Do you have the TOTAL ?



NO

I have parts

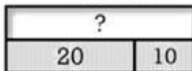
I need to combine

Do you have **EQUAL** parts or groups ?

NO

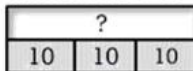
YES

+ ADD

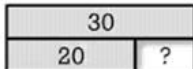


in all, altogether, total, combine, sum, more

× MULTIPLY



each, equally, times, per, every, share, rate



YES

I am missing parts

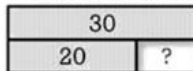
I need to separate

Do you need **EQUAL** parts or groups ?

NO

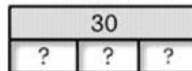
YES

- SUBTRACT



left, difference, change, more than, less than, how much/many ??-er

÷ DIVIDE





How can you help?

- Homework.
- Fact families practise.
- Refer to it in real-life mathematical situations:
 - Paying with money;
 - Measuring opportunities (time, quantity);
- Ask children to represent any problems you do at home using a bar model;



Let's have a go!

